

Pipeline Group Factual Report

ATTACHMENT 3

PHMSA Accident Report HL20070334

**Carmichael, Mississippi
DCA 08 MP 001**



U.S. Department of Transportation
Research and Special Programs
Administration

ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date NOV 30, 2007

No. 20070334 -- 6525
(DOT Use Only)

INSTRUCTIONS

Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions you can obtain one from the Office Of Pipeline Safety Web Page at <http://ops.dot.gov>

PART A - GENERAL REPORT INFORMATION

check: ☒ Original Report ☐ Supplemental Report ☐ Final Report

1. a. Operator's OPS 5-digit Identification Number (if know) 3445 /
b. If Operator does not own the pipeline, enter Owner's OPS 5-digit Identification Number (if know) /
c. Name of Operator DIXIE PIPELINE
d. Operator street address 1080 HOLCOMB BRIDGE ROAD, BLDG 100, STE 325
e. Operator address ROSWELL FULTON GA 30076
City, County, State and ZIP Code

IMPORTANT: IF THE SPILL IS SMALL, THAT IS, THE AMOUNT IS AT LEAST 5 GALLONS BUT IS LESS THAN 5 BARRELS, COMPLETE THIS PAGE ONLY, UNLESS THE SPILL IS TO WATER AS DESCRIBED IN 49 CFR §195.52(A)(4) OR IS OTHERWISE REPORTABLE UNDER §195.50 AS REVISED IN CY 2001.

2. Time and date of the accident

/ 1054 / / 11 / / 01 / / 2007 /
hr. month day year

3. Location of accident

(If offshore, do not complete a through d See Part C.1)

a. Latitude: N31 55.23 Longitude: W88 31.53
(If not available, see instructions for how to provide specific location)

b. CRANDALL CLARKE
City and County or Parish

c. MS 39367
State and Zip Code

425.98

d. Mile post/valve station ☒ or Survey Station no. ☐
(whichever gives more accurate location)

425.98

4. Telephone report

/ 853298 / / 11 / / 01 / / 2007 /
NRC Report Number month day year

5. Losses (Estimated)

Public/Community Losses reimbursed by operator:

Public/private property damage	\$ <u>1,000,000</u>
Cost of emergency response phase	\$ <u>8,210</u>
Cost of environmental remediation	\$ <u>0</u>
Other Costs	\$ <u>0</u>
(describe)	

Operator Losses:

Value of product lost	\$ <u>693,000</u>
Value of operator property damage	\$ <u>436,976</u>
Other Costs	\$ <u>0</u>
(describe)	

Total Costs: \$ 2,138,186

6. Commodity Spilled ☒ Yes ☐ No

(If Yes, complete Parts a through c where applicable)

a. Name of commodity spilled PROPANE

b. Classification of commodity spilled:

- ☒ HVLs/other flammable or toxic fluid which is a gas at ambient conditions
☐ CO₂ or other non-flammable, non-toxic fluid which is a gas at ambient conditions
☐ Gasoline, diesel, fuel oil or other petroleum product which is a liquid at ambient conditions
☐ Crude oil

c. Estimated amount of commodity involved:

- ☒ Barrels
☐ Gallons (check only if spill is less than one barrel)

Amounts:

Spilled: 11,000

Recovered: _____

CAUSES FOR SMALL SPILLS ONLY (5 gallons to under 5 barrels):

(For large spills [5 barrels or greater] see Part H)

- | | | | |
|---|--------------------------------------|---|--|
| <input type="radio"/> Corrosion | <input type="radio"/> Natural Forces | <input type="radio"/> Excavation Damage | <input type="radio"/> Other Outside Force Damage |
| <input type="radio"/> Material and/or Weld Failures | <input type="radio"/> Equipment | <input type="radio"/> Incorrect Operation | <input type="radio"/> Other |

PART B - PREPARER AND AUTHORIZED SIGNATURE

JOEL E. KOHLER

(type or print) Preparer's Name and Title

(713) 381-4830

Area Code and Telephone Number

JKOHLER@EPROD.COM

Preparer's E-mail Address

(713) 381-8790

Area Code and Facsimile Number

Authorized Signature

(type or print) Name and Title

Date

Area Cod and Telephone Number

PART C - ORIGIN OF THE ACCIDENT (Check all that apply)

1. Additional location information

a. Line segment name or ID **12" DIXIE PIPELINE**b. Pipeline on Federal land other than Outer Continental Shelf ☐ Yes ☒ Noc. Is pipeline interstate? ☒ Yes ☐ NoOffshore: ☐ Yes ☒ No (complete if offshore)

d. Area _____ Block # _____

State / / or Outer Continental Shelf ☐

2. Location of system involved (check all that apply)

- ☐ Operator's Property
☒ Pipeline Right of Way
☐ High Consequence Area (HCA)?
Describe HCA _____

3. Part of system involved in accident

- ☐ Above Ground Storage Tank
☐ Cavern or other below ground storage facility
☐ Pump/meter station; terminal/tank farm piping and equipment, including sumps
☐ Other Specify: _____

☒ Onshore **pipeline**, including valve sites☐ Offshore **pipeline**, including platformsif failure occurred on **pipeline**, complete items a - g:

4. Failure occurred on

- | | | |
|---|--|---|
| <input type="radio"/> Body of Pipe | <input checked="" type="radio"/> Pipe Seam | <input type="radio"/> Scraper Trap |
| <input type="radio"/> Pump | <input type="radio"/> Sump | <input type="radio"/> Joint |
| <input type="radio"/> Component | <input type="radio"/> Valve | <input type="radio"/> Metering Facility |
| <input type="radio"/> Repair Sleeve | <input type="radio"/> Welded Fitting | <input type="radio"/> Bolted Fitting |
| <input type="radio"/> Girth Weld | | |
| <input type="radio"/> Other (specify) _____ | | |

Year the component that failed was installed: 1961 /

5. Maximum operating pressure (MOP)

a. Estimated pressure at point and time of accident:

 1,405 PSIG

b. MOP at time of accident:

 1,448 PSIG

c. Did an overpressurization occur relating to the accident?

☐ Yes ☒ No

a. Type of leak or rupture

☐ Leak: ☐ Pinhole ☐ Connection Failure (complete sec. H5)
☐ Puncture, diameter (inches) _____

☒ Rupture: ☐ Circumferential - Separation
☒ Longitudinal - Tear/Crack, length (inches) 636
Propagation Length, total, both sides (feet) 53

☐ N/A☐ Other _____

b. Type of block valve used for isolation of immediate section:

Upstream:

☐ Manual ☐ Automatic ☒ Remote Control
☐ Check Valve

Downstream:

☐ Manual ☐ Automatic ☒ Remote Control
☐ Check Valve

c. Length of segment isolated 63,360 ftd. Distance between valves 63,360 fte. Is segment configured for internal inspection tools? ☒ Yes ☐ Nof. Had there been an in-line inspection device run at the point of failure? ☒ Yes ☐ No ☐ Don't Know☐ Not Possible due to physical constraints in the system

g. If Yes, type of device run (check all that apply)

☒ High Resolution Magnetic Flux tool Year run: 2006 ☐ Low Resolution Magnetic Flux tool Year run: _____☒ UT tool Year run: 2005 ☒ Geometry tool Year run: 2006 ☐ Caliper tool Year run: _____☐ Crack tool Year run: _____☐ Hard Spot tool Year run: _____☐ Other tool Year run: _____**PART D - MATERIAL SPECIFICATION**1. Nominal pipe size (NPS) 12 / in.2. Wall thickness .25 / in.3. Specification API 5L SMYS 52000 /4. Seam type ERW

5. valve type _____

6. Manufactured by LONE STAR in year 1961 /**PART E - ENVIRONMENT**1. Area of accident ☐ In open ditch☐ Under pavement ☐ Above ground☒ Underground ☐ Under water☐ Inside/under building ☐ Other _____2. Depth of cover: 41 inches**PART F - CONSEQUENCES**

1. Consequences (check and complete all that apply)

a. Fatalities Injuries

Number of operator employees: 0 0 Contractor employees working for operator: 0 0 General public: 2 8 Totals: 2 8 b. Was pipeline/segment shutdown due to leak? ☒ Yes ☐ NoIf Yes, how long? 10 days 19 hours 0 minutesc. Product ignited ☒ Yes ☐ No d. Explosion ☒ Yes ☐ Noe. ☒ Evacuation (general public only) 250 / people

Reason for Evacuation:

☐ Precautionary by company☒ Evacuation required or initiated by public official

f. Elapsed time until area was made safe:

 48 / hr. / / min.

2. Environmental Impact

a. Wildlife Impact: Fish/aquatic ☐ Yes ☒ No
Bird ☐ Yes ☒ No
Terrestrial ☐ Yes ☒ No

b. Soil Contamination ☐ Yes ☒ No

If Yes, estimated number of cubic yards: _____

c. Long term impact assessment performed: ☒ Yes ☐ Nod. Anticipated remediation ☒ Yes ☐ NoIf Yes, Check all that apply: ☐ Surface water ☐ Groundwater ☒ Soil ☒ Vegetation ☐ Wildlifee. Water Contamination: ☐ Yes ☒ No (If Yes, provide the following)

Amount in water _____ barrels

Ocean/Seawater ☐ No ☐ YesSurface ☐ No ☐ YesGroundwater ☐ No ☐ YesDrinking water ☐ No ☐ Yes (If Yes, check below.)☐ Private well ☐ Public water intake

PART G - LEAK DETECTION INFORMATION

1. Computer based leak detection capability in place? ☐ Yes ☒ No
2. Was the release initially detected by? (check one): ☐ CPM/SCADA-based system with leak detection
☐ Static shut-in test or other pressure or leak test
☐ Local operating personnel, procedures or equipment
☒ Remote operating personnel, including controllers
☐ Air patrol or ground surveillance
☐ A third party ☐ Other (specify) _____
3. Estimated leak duration days _____ hours _____

PART H - APPARENT CAUSE

Important: There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.

H1 - CORROSION

1. ☐ External Corrosion
2. ☐ Internal Corrosion
 (Complete items a - e where applicable.)
- a. Pipe Coating ☐ Bare ☐ Coated
- b. Visual Examination ☐ Localized Pitting
☐ General Corrosion
☐ Other _____
- c. Cause of Corrosion ☐ Galvanic ☐ Atmospheric
☐ Stray Current ☐ Microbiological
☐ Cathodic Protection Disrupted
☐ Stress Corrosion Cracking
☐ Selective Seam Corrosion
☐ Other _____
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?
☐ No ☐ Yes, Year Protection Started: / /
- e. Was pipe previously damaged in the area of corrosion?
☐ No ☐ Yes => Estimated time prior to accident: / / years / / months Unknown ☐

H2 - NATURAL FORCES

3. ☐ Earth Movement => ☐ Earthquake ☐ Subsidence ☐ Landslide ☐ Other _____
4. ☐ Lightning
5. ☐ Heavy Rains/Floods => ☐ Washouts ☐ Flotation ☐ Mudslide ☐ Scouring ☐ Other _____
6. ☐ Temperature => ☐ Thermal stress ☐ Frost heave ☐ Frozen components ☐ Other _____
7. ☐ High Winds

H3 - EXCAVATION DAMAGE

8. ☐ Operator Excavation Damage (including their contractors/Not Third Party)
9. ☐ Third Party (complete a-f)
- a. Excavator group ☐ General Public ☐ Government ☐ Excavator other than Operator/subcontractor
- b. Type: ☐ Road Work ☐ Pipeline ☐ Water ☐ Electric ☐ Sewer ☐ Phone/Cable
☐ Landowner-not farming related ☐ Farming ☐ Railroad
☐ Other liquid or gas transmission pipeline-operator or their contractor
☐ Nautical Operations ☐ Other _____
- c. Excavation was: ☐ Open Trench ☐ Sub-strata (boring, directional drilling, etc...)
- d. Excavation was an ongoing activity (Month or longer) ☐ Yes ☐ No If Yes, Date of last contact / /
- e. Did operator get prior notification of excavation activity?
☐ Yes; Date received: / / mo. / / day / / yr. ☐ No
 Notification received from: ☐ One Call System ☐ Excavator ☐ Contractor ☐ Landowner
- f. Was pipeline marked as result of location request for excavation? ☐ No ☐ Yes (If Yes, check applicable items i - iv)
- i. Temporary markings: ☐ Flags ☐ Stakes ☐ Paint
- ii. Permanent markings: ☐ Yes ☐ No
- iii. Marks were (check one): ☐ Accurate ☐ Not Accurate
- iv. Were marks made within required time? ☐ Yes ☐ No

H4 - OTHER OUTSIDE FORCE DAMAGE

10. ☐ Fire/Explosion as primary cause of failure => Fire/Explosion cause: ☐ Man Made ☐ Natural
11. ☐ Car, truck or other vehicle not relating to excavation activity damaging pipe
12. ☐ Rupture of Previously Damaged Pipe
13. ☐ Vandalism

H5 - MATERIAL AND/OR WELD FAILURES

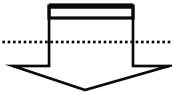
Material

14. ☐ Body of Pipe => ☐ Dent ☐ Gouge ☐ Bend ☐ Arc Burn ☐ Other _____
15. ☐ Component => ☐ Valve ☐ Fitting ☐ Vessel ☐ Extruded Outlet ☐ Other _____
16. ☐ Joint => ☐ Gasket ☐ O-Ring ☐ Threads ☐ Other _____

Weld

17. ☐ Butt => ☐ Pipe ☐ Fabrication ☐ Other _____
18. ☐ Fillet => ☐ Branch ☐ Hot Tap ☐ Fitting ☐ Repair Sleeve ☐ Other _____
19. ☐ Pipe Seam => ☐ LF ERW ☐ DSAW ☐ Seamless ☐ Flash Weld
☐ HF ERW ☐ SAW ☐ Spiral ☐ Other _____

Complete a-g if you indicate any cause in part H5.



a. Type of failure:

- ☐ Construction Defect => ☐ Poor Workmanship ☐ Procedure not followed ☐ Poor Construction Procedures
☐ Material Defect

b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? ☐ Yes ☐ No

c. Was part which leaked pressure tested before accident occurred? ☐ Yes, complete d-g ☐ No

d. Date of test: ____/____/ yr. ____/____/ mo. ____/____/ day

e. Test medium: ☐ Water ☐ Inert Gas ☐ Other _____

f. Time held at test pressure: ____/____/ hr.

g. Estimated test pressure at point of accident: _____ PSIG

H6 - EQUIPMENT

20. ☐ Malfunction of Control/Relief Equipment => ☐ Control valve ☐ Instrumentation ☐ SCADA ☐ Communications
☐ Block valve ☐ Relief valve ☐ Power failure
☐ Other _____
21. ☐ Threads Stripped Broken Pipe Coupling => ☐ Nipples ☐ Valve Threads ☐ Dresser Couplings
☐ Other _____
22. ☐ Seal Failure => ☐ Gasket ☐ O-Ring ☐ Seal/Pump Packing
☐ Other _____

H7 - INCORRECT OPERATION

23. ☐ Incorrect Operation

- a. Type ☐ Inadequate Procedures ☐ Inadequate Safety Practices ☐ Failure to Follow Procedures
☐ Other _____

b. Number of employees involved who failed a post-accident test: drug test: ____/____/ alcohol test ____/____/

H8 - OTHER

24. ☐ Miscellaneous, describe: _____
25. ☒ Unknown
☐ Investigation Complete ☒ Still Under Investigation (Submit a supplemental report when investigation is complete)

PART I - NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT

(Attach additional sheets as necessary)

ADDITIONAL FOLLOW-UP CALL WAS MADE TO THE NRC TO REVISE THE RELEASE VOLUME - NRC # 853579.

RELEASE INVESTIGATION IS ONGOING.



U.S. Department of Transportation
Research and Special Programs
Administration

ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date _____

No. _____
(DOT Use Only)

INSTRUCTIONS

Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the Office Of Pipeline Safety Web Page at <http://ops.dot.gov>.

PART A – GENERAL REPORT INFORMATION

Check one or more boxes as appropriate:

Original Report **Supplemental Report** **Final Report**

1. a. Operator's OPS 5-digit Identification Number (if known) _____
2. b. If Operator does not own the pipeline, enter Owner's OPS 5-digit Identification Number (if known) _____
- c. Name of Operator _____
- d. Operator street address _____
- e. Operator address _____
City, County, State and Zip Code _____

IMPORTANT: IF THE SPILL IS SMALL, THAT IS, THE AMOUNT IS AT LEAST 5 GALLONS BUT IS LESS THAN 5 BARRELS, COMPLETE THIS PAGE ONLY, UNLESS THE SPILL IS TO WATER AS DESCRIBED IN 49 CFR §195.52(A)(4) OR IS OTHERWISE REPORTABLE UNDER §195.50 AS REVISED IN CY 2001.

2. Time and date of the accident
_____/_____/_____
hr. month day year

3. Location of accident
(If offshore, do not complete a through d. See Part C.1)

a. Latitude: _____ Longitude: _____
(if not available, see instructions for how to provide specific location)

b. _____
City, and County or Parish

c. _____
State and Zip Code

d. Mile post/valve station or survey station no.
(whichever gives more accurate location)

4. Telephone report
_____/_____/_____
NRC Report Number month day year

5. Losses (Estimated)

Public/Community Losses reimbursed by operator:

Public/private property damage \$ _____

Cost of emergency response phase \$ _____

Cost of environmental remediation \$ _____

Other Costs \$ _____
(describe) _____

Operator Losses:

Value of product lost \$ _____

Value of operator property damage \$ _____

Other Costs \$ _____

(describe) _____

Total Costs \$ _____

6. Commodity Spilled Yes No
(If Yes, complete Parts a through c where applicable)

a. Name of commodity spilled _____

b. Classification of commodity spilled:
HVLs /other flammable or toxic fluid which is a gas at ambient conditions
CO₂ or other non-flammable, non-toxic fluid which is a gas at ambient conditions
Gasoline, diesel, fuel oil or other petroleum product which is a liquid at ambient conditions
Crude oil

c. Estimated amount of commodity involved :

Barrels

Gallons (check only if spill is less than one barrel)

Amounts:

Spilled : _____

Recovered: _____

CAUSES FOR SMALL SPILLS ONLY (5 gallons to under 5 barrels) :

(For large spills [5 barrels or greater] see Part H)

Corrosion

Natural Forces

Excavation Damage

Other Outside Force Damage

Material and/or Weld Failures

Equipment

Incorrect Operation

Other

PART B – PREPARER AND AUTHORIZED SIGNATURE

(type or print) Preparer's Name and Title _____

Area Code and Telephone Number _____

Preparer's E-mail Address _____

Area Code and Facsimile Number _____

Authorized Signature _____

(type or print) Name and Title _____

Date _____

Area Code and Telephone Number _____

PART C – ORIGIN OF THE ACCIDENT (Check all that apply)

1. Additional location information

- a. Line segment name or ID _____
b. Accident on Federal land other than Outer Continental Shelf Yes No
c. Is pipeline interstate? Yes No

Offshore: Yes No (complete d if offshore)

d. Area _____ Block # _____
State /_____/ or Outer Continental Shelf

2. Location of system involved (check all that apply)

Operator's Property
Pipeline Right of Way
High Consequence Area (HCA)?
Describe HCA _____

3. Part of system involved in accident

Above Ground Storage Tank
Cavern or other below ground storage facility
Pump/meter station; terminal/tank farm piping and equipment, including sumps
Other Specify: _____

Onshore **pipeline**, including valve sitesOffshore **pipeline**, including platformsIf failure occurred on **Pipeline**, complete items a - g:

4. Failure occurred on

Body of Pipe	Pipe Seam	Scraper Trap
Pump	Sump	Joint
Component	Valve	Metering Facility
Repair Sleeve	Welded Fitting	Bolted Fitting
Girth Weld		
Other (specify) _____		

Year the component that failed was installed: /_____/

5. Maximum operating pressure (MOP)

- a. Estimated pressure at point and time of accident: _____ PSIG
b. MOP at time of accident: _____ PSIG
c. Did an overpressurization occur relating to the accident?
Yes No

a. Type of leak or rupture

Leak: Pinhole Connection Failure (complete sec. H5)
Puncture, diameter (inches) _____
Rupture: Circumferential – Separation
Longitudinal – Tear/Crack, length (inches) _____
Propagation Length, total, both sides (feet) _____
N/A
Other _____

b. Type of block valve used for isolation of immediate section:

Upstream: Manual Automatic Remote Control
Check Valve
Downstream: Manual Automatic Remote Control
Check Valve

c. Length of segment isolated _____ ft

d. Distance between valves _____ ft

e. Is segment configured for internal inspection tools? Yes No

f. Had there been an in-line inspection device run at the point of failure? Yes No Don't Know
Not Possible due to physical constraints in the system

g. If Yes, type of device run (check all that apply)

High Resolution Magnetic Flux tool	Year run: _____
Low Resolution Magnetic Flux tool	Year run: _____
UT tool	Year run: _____
Geometry tool	Year run: _____
Caliper tool	Year run: _____
Crack tool	Year run: _____
Hard Spot tool	Year run: _____
Other tool	Year run: _____

PART D – MATERIAL SPECIFICATION

1. Nominal pipe size (NPS) /_____/ in.
2. Wall thickness /_____/ in.
3. Specification _____ SMYS /_____/ in.
4. Seam type _____
5. Valve type _____
6. Manufactured by _____ in year /_____/

PART E – ENVIRONMENT

1. Area of accident In open ditch
Under pavement Above ground
Underground Under water
Inside/under building Other _____
2. Depth of cover: _____ inches

PART F – CONSEQUENCES

1. Consequences (check and complete all that apply)

a.

	Fatalities	Injuries
Number of operator employees:	_____	_____
Contractor employees working for operator:	_____	_____
General public:	_____	_____
Totals:	_____	_____

b. Was pipeline/segment shutdown due to leak? Yes No
If Yes, how long? _____ days _____ hours _____ minutes

c. Product ignited Yes No d. Explosion Yes No
e. Evacuation (general public only) /_____/ people
Reason for Evacuation:
Precautionary by company
Evacuation required or initiated by public official
f. Elapsed time until area was made safe:
/_____/ hr. /_____/ min.

2. Environmental Impact

a. Wildlife Impact: Fish/aquatic Yes No
Birds Yes No
Terrestrial Yes No
b. Soil Contamination Yes No
If Yes, estimated number of cubic yards: _____
c. Long term impact assessment performed: Yes No
d. Anticipated remediation Yes No
If Yes, check all that apply: Surface water Groundwater

e. Water Contamination: Yes No (If Yes, provide the following)
Amount in water _____ barrels
Ocean/Seawater No Yes
Surface No Yes
Groundwater No Yes
Drinking water No Yes (If Yes, check below.)
Private well Public water intake
Soil Vegetation Wildlife

PART G – LEAK DETECTION INFORMATION

1. Computer based leak detection capability in place? Yes No
2. Was the release initially detected by? (check one): CPM/SCADA-based system with leak detection
Static shut-in test or other pressure or leak test
Local operating personnel, procedures or equipment
Remote operating personnel, including controllers
Air patrol or ground surveillance
A third party Other (specify) _____
3. Estimated leak duration days ____ hours ____

PART H – APPARENT CAUSE

Important: There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.

H1 – CORROSION

1. External Corrosion
2. Internal Corrosion
- (Complete items a – e where applicable.)
- a. Pipe Coating
Bare
Coated
- b. Visual Examination
Localized Pitting
General Corrosion
Other _____
- c. Cause of Corrosion
Galvanic Atmospheric
Stray Current Microbiological
Cathodic Protection Disrupted
Stress Corrosion Cracking
Selective Seam Corrosion
Other _____
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?
No Yes, Year Protection Started: _____
- e. Was pipe previously damaged in the area of corrosion?
No Yes => Estimated time prior to accident: / ____ / years / ____ / months Unknown

H2 – NATURAL FORCES

3. Earth Movement => Earthquake Subsidence Landslide Other _____
4. Lightning
5. Heavy Rains/Floods => Washouts Flotation Mudslide Scouring Other _____
6. Temperature => Thermal stress Frost heave Frozen components Other _____
7. High Winds

H3 – EXCAVATION DAMAGE

8. Operator Excavation Damage (including their contractors/Not Third Party)
9. Third Party (complete a-f)
- a. Excavator group
General Public Government Excavator other than Operator/subcontractor
- b. Type: Road Work Pipeline Water Electric Sewer Phone/Cable
Landowner-not farming related Farming Railroad
Other liquid or gas transmission pipeline operator or their contractor
Nautical Operations Other _____
- c. Excavation was: Open Trench Sub-strata (boring, directional drilling, etc...)
- d. Excavation was an ongoing activity (Month or longer) Yes No If Yes, Date of last contact / ____ /
- e. Did operator get prior notification of excavation activity?
Yes; Date received: / ____ / mo. / ____ / day / ____ / yr. No
Notification received from: One Call System Excavator Contractor Landowner
- f. Was pipeline marked as result of location request for excavation? No Yes (If Yes, check applicable items i - iv)
- i. Temporary markings: Flags Stakes Paint
- ii. Permanent markings:
- iii. Marks were (check one) : Accurate Not Accurate
- iv. Were marks made within required time? Yes No

H4 – OTHER OUTSIDE FORCE DAMAGE

10. Fire/Explosion as primary cause of failure => Fire/Explosion cause: Man made Natural
11. Car, truck or other vehicle not relating to excavation activity damaging pipe
12. Rupture of Previously Damaged Pipe
13. Vandalism

H5 – MATERIAL AND/OR WELD FAILURES**Material**

14. Body of Pipe => Dent Gouge Bend Arc Burn Other _____
15. Component => Valve Fitting Vessel Extruded Outlet Other _____
16. Joint => Gasket O-Ring Threads Other _____

Weld

17. Butt => Pipe Fabrication Other _____
18. Fillet => Branch Hot Tap Fitting Repair Sleeve Other _____
19. Pipe Seam => LF ERW DSAW Seamless Flash Weld Other _____
HF ERW SAW Spiral

Complete a-g if you indicate **any** cause in part H5.

- a. Type of failure:
Construction Defect => Poor Workmanship Procedure not followed Poor Construction Procedures
Material Defect
- b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? Yes No
- c. Was part which leaked pressure tested before accident occurred? Yes, complete d-g No
- d. Date of test: ____ / ____ / yr. ____ / ____ / mo. ____ / ____ / day
- e. Test medium: Water Inert Gas Other _____
- f. Time held at test pressure: ____ / hr.
- g. Estimated test pressure at point of accident: _____ PSIG

H6 – EQUIPMENT

20. Malfunction of Control/Relief Equipment => Control valve Instrumentation SCADA Communications
Block valve Relief valve Power failure Other _____
21. Threads Stripped, Broken Pipe Coupling => Nipples Valve Threads Dresser Couplings Other _____
22. Seal Failure => Gasket O-Ring Seal/Pump Packing Other _____

H7 – INCORRECT OPERATION

23. Incorrect Operation
a. Type: Inadequate Procedures Inadequate Safety Practices Failure to Follow Procedures
Other _____
- b. Number of employees involved who failed a post-accident test: drug test: ____ / ____ / alcohol test: ____ / ____ /

H8 – OTHER

24. Miscellaneous, describe: _____
25. Unknown
Investigation Complete Still Under Investigation (submit a supplemental report when investigation is complete)

PART I – NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT

(Attach additional sheets as necessary)